

ACCIDENTS

MURDER
UNDER THE
MICROSCOPE



These activities will give you and your group some valuable information which might help you when solving the crime.

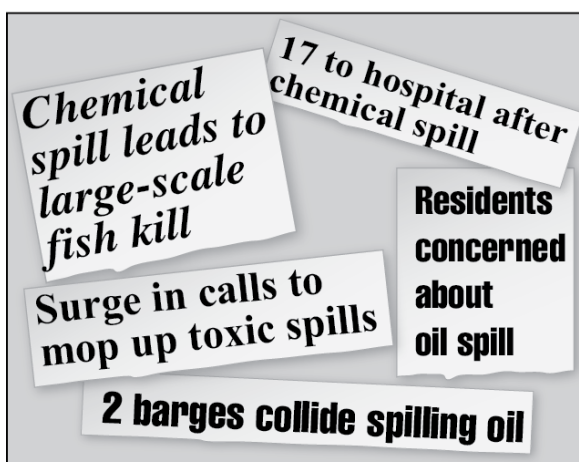
Look for and collect articles relating to accidents in and around waterways. These might show how widespread and how serious accidents in the water system can be.

What could be in the water?



Discuss in your group the possible causes of contamination in this river.

What else may be spilled in the waterway?

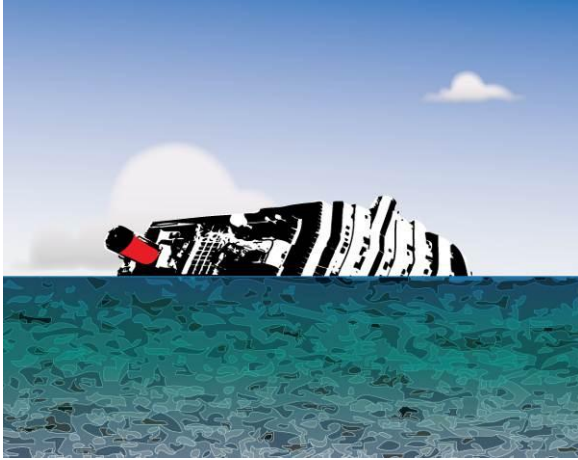


Brainstorm a list of things that you think might be accidentally spilled into our waterways.

Hint: Think about the newspaper articles you have collected or read.

Accidental or thoughtless?

What would your answer be? Discuss each of these situations and decide what you would say.



'No, I was not wearing my glasses. I can see really well without my glasses unless I'm very tired. How could the accident have been my fault?'



'We always test our drilling units carefully before we begin drilling. We have no idea how the oil leak started.'



'Engine failure can happen at any time! Our ships are all well maintained and I don't see how we can be blamed for the collision.'



'We had no idea that the chemical spilt here would reach the waterways and be dispersed so easily.'

How did it happen?

Look again at the situations outlined in the previous activity.
Choose one situation and find a way to show how the pollutant reached the waterway.

You could:

- build a model
- construct a flow chart
- draw and label a picture

What kind of accident?



Using the internet, newspapers and other sources of information, research one major incident in which toxic material entered the waterways. Ask your teacher or librarian for help if you need some leads in your investigation. The links below may be useful.

Useful links:

http://www.amsa.gov.au/marine_environment_protection/major_oil_spills_in_australia/
http://www.rfi.fr/actuen/articles/111/article_3131.asp
http://www.ntnews.com.au/article/2010/04/30/143781_ntnews.html

Find out:

- where the accident occurred
- who took responsibility
- how the accident might have been avoided
- what was done to rectify the problem
- how similar accidents could be avoided in the future.

Remember, it may not have been an accident!

Present your evidence in an interesting way to share with the other members of your team.

Is the water contaminated?

Find out what tests scientists can carry out to monitor for substances which cannot be seen in the water, such as sewage or toxic waste.

You could:

- ring your local council engineer
- look for information on the internet
- ring the CSIRO to ask an expert

Find out who does the testing, what the procedure involves, how long it takes to get results and who takes action to rectify the problems that are identified. Ask about the signs of change you might observe around a contaminated waterway.

Activity: The story of a river



Be prepared! You will need to spend time collecting the materials required for the following experiment.

This activity explores the short-term and long-term effects of water pollution within a catchment. It is suitable as a class activity.

Further details for teachers are available at:

<http://www.derm.qld.gov.au/education/teachers/catchment/activities/activity01.html>

http://www.derm.qld.gov.au/education/teachers/catchment/resources/catchment_resource_sheet_02.pdf

What to do

As the story (Resource Sheet 2) is read to the class, students pour a series of substances (details are in Resource Sheet 1) into the 'river', a clear container filled with water.

Discuss: What do you think of the river now?

Extension activity

Can you find ways of cleaning up the 'river' after adding all the substances listed in the experiment *The Story of a River*. (You may want to test one substance at a time.)

Sharing information



What have you found out that might help you understand the crime? Share this information with the other groups.

Find a way to explain the issues related to accidents and show that they can affect the quality of our water. You might use the material you prepared when you researched one major incident.

Hint: For more information talk to the group who explored run-off.